

**In the Specification:**

Before the claims, please insert the sequence listing.

Please amend the specification as shown:

Please delete paragraph [0084] and replace it with the following paragraph:

**[0084]** Table 2 provides amino acid (SEQ ID NO: 8) and nucleic acid (SEQ ID NO: 9) sequences for a PDE5A phosphodiesterase domain. Numbering on the amino acid sequence does not correspond to standard numbering for native PDE5A. The primers are shown in SEQ ID NOS 3-4, respectively.

Please delete paragraph [0085] and replace it with the following paragraph:

**[0085]** Table 3 provides an alignment of phosphodiesterase domains for several phosphodiesterases, (SEQ ID NOS 10-31, respectively, in order of appearance) including human PDE5A, providing identification of residues conserved between various members of the set.

Please delete paragraph [0086] and replace it with the following paragraph:

**[0086]** Table 4 provides the nucleic acid (SEQ ID NO: 1) and amino acid (SEQ ID NO: 2) sequences for human PDE5A phosphodiesterase.

Please delete paragraph [0311] and replace it with the following paragraph:

**[0311]** PDE5A cDNA sequence was amplified from a Human Kidney QUICK-Clone cDNA library (Clontech, #7112-1) by PCR using the following primers:

PDE5A-S: 5'-GTCGTAT CATATG TCAGCAGCAGAGGAAGAAAC-3' 33 mer (SEQ ID NO: 3)  
PDE5A-A: 5'-TCTGCA GTCGAC AGGCCACTCAGTTCCGCTTG-3' 32 mer (SEQ ID NO: 4)

Please delete paragraph [0313] and replace it with the following paragraph:

[0313] The sequence of pET15S (SEQ ID NOS 5-6), with multi-cloning site is shown below:

**T7 promoter**  
AGATCTCGATCCCGCGAAATTAATACGACTCACTATAGGGGAATTGTGAGCGGATAACAATTCCC

**RBS**

TCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACC

**NdeI**

ATGGGCAGCAGCCATCATCATCATCACAGCAGCGGCCTGGTGCCGCGCGGCAGCCATATGGGATCCGG  
 M G S S H H H H H S S G L V P R G S H M -----

**StuI      SalI**

AATTCAAAGGCCTACGTCGACTAGAGCCTGCAGTCTCGACCATCATCATCATCATTAATAAAAGGCC  
 ----- \*

**SpeI    BamHI**

ATTCGAGGACACTGGCGGCCGTTACTAGTGGATCCGGCTGCTAACAAAGCCCGAAAGGAAGCTGAGTTGG  
 IVEX-3 Primer

**Bpu1102 I                      T7 terminator**

CTGCTGCCACCTCTGAGCAATACTACCATACCCCTTGGGGCCTCTAAACGGGTCTTGAGGGGTTTTTTG  
 3'-PET Primer

Please delete paragraph [0314] and replace it with the following paragraph:

[0314] pET15S vector is derived from pET15b vector (Novagen) for bacterial expression to produce the proteins with N-terminal His6 (SEQ ID NO: 7). This vector was modified by replacement of NdeI-BamHI fragment to others to create a SalI site and stop codon (TAG). Vector size is 5814 bp. Insertion can be performed using NdeI-SalI site.